



4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: TC-5548

NAME OF WORK: Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
Materials						
1	Cement	Fineness by dry sieving	One Test		1	1
		Fineness by Air permeability method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
2	Coarse aggregate(40 mm down size)	Compressive Strength	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
3	Coarse aggregate(20 mm down size)	Water Absorption	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
4	Fine aggregate	Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	KERB	Core Compressive strength	One Test		1	1
		Corrected Cylinder Compressive strength	One Test		1	1
		Equivalent Cube Compressive strength	One Test		1	1
7	Precast (100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	CP-2021-02-04-06	Date: 25-01-21
Project Name	:	Asphalting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division	
Agency	:	M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010	
Customer's Reference	:	BBMP/EE/YNK.D/W.O/199/2019-20	
Date of Receipt	:	22-01-21	
Sample Type	:	Birla Super 53grade	
Reference to BIS codes	:	IS 12269 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6	
Date of test	:	23-01-21	
Environmental Conditions during test	:	Temperature:	26°C
		Humidity:	72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.98	—
2	Finess by Air permeability method (m ² /kg.Min)	297.3	225m ² /kg. Min
3	Density (gm/cc)	3.11	—
4	Standard Consistency (%)	29.5%	Not specified
5	Initial Setting time	175 minutes	Not less than 30 minutes
6	Final Setting time	285 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

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FOR CIVIL Pro.
R KARTHIK RECIAN
Authorized Signatory
Quality Manager

Page 1/1
 ****End of Report****

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2021-02-04-06 Date: 25-01-21
 Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03
 Yelahanka satellite Town sub Division
 Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block,
 17th Main Shivakumar Swamy Building, Bhashyam Circle
 Bangalore-560010
 Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20
 Date of Receipt : 22-01-21
 Sample Type : 40mm down size coarse aggregate
 Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
 IS: 2386 :1963(Part - 1,3,4) RA2011
 IS 2386 Part 1: Particle Size and Shape
 IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
 IS 2386 Part 4: Mechanical Properties
 Date of test : 22-01-21

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	214	214	1.4	98.6	90-100
3	20 mm	5049	5263	35.1	64.9	30-70
4	10 mm	7132	12395	82.6	17.4	10-35
5	4.75 mm	2121	14516	96.8	3.2	0-5
6	Pan	484	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2021-02-04-06

Date: 25-01-21

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.8	
3	Specific Gravity	2.57	-
4	Bulk Density(Loose) (Kg/l)	1.41	-
5	Bulk Density(Compacted) (Kg/l)	1.49	-
6	Water Absorption(%)	0.28	-
7	Aggregate crushing Value(%)	23.1	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	21.7	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signature
Quality Manager



TEST REPORT OF FINE AGGREGATE

Lab ID

: CP-2021-02-04-06

Date: 25-01-21

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	—
2	Specific Gravity	2.59	—
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

* The results obtained are satisfactory as per standard requirements.

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****End of Report****



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Quality Manager



Format No: CP/TF/01

TEST REPORT OF PRECAST COVER SLAB

Lab ID : CP-2021-02-04-06 Date: 20-02-21
Project Name : Asphalting to Sainagara phase-I and surrounding areas in ward no-03 Yelahanka satellite Town sub Division
Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20
Date of Receipt : 16-02-21
Sample Type /Size : Precast Cover Slab (100mm)
Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete
Date of test : 16/02/2021

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm ²)	(N/mm ²)	(N/mm ²)
1	Cover Slab-1	75.51	100.48	1.116	4477	80.9	18.1	16.8	21.0
2	Cover Slab-2	75.49	100.52	1.122	4475	82.3	18.4	17.1	21.4
3	Cover Slab-3	75.50	100.51	1.118	4476	81.5	18.2	16.9	21.2

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2021-02-04-06 Date: 05/03/2021
Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub
Agency : Division
Customer's Reference : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy
Date of Receipt : Building, Bhashyam Circle Bangalore-560010
Customer ID : BBMP/EE/YNK.D/W.O/199/2019-20
Sample Type /Size : 150X150X150 mm
Sample grade/Age : M15 / 7 Days Compressive Strength
Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test : 05/03/2021

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	PCC	M15	26/02/2021	05/03/2021	149.14 X 151.30 X 149.38	22566	8.942	274.5	12.2	12.4
2	PCC	M15	26/02/2021	05/03/2021	150.25 X 151.01 X 150.87	22690	8.690	285.8	12.6	
3	PCC	M15	26/02/2021	05/03/2021	149.41 X 151.30 X 151.76	22605	8.280	281.0	12.4	

* The results obtained are satisfactory as per standard requirements.

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Authorized Signatory
Quality Manager



Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2021-02-04-06 Date: 26/03/2021

Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Ye'ahanka satellite Town sub Division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010

Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20

Date of Receipt : 01-03-21

Customer ID : PCC, 1st cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/03/2021

Date of test : 26/03/2021										
SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	PCC	M15	26/02/2021	26/03/2021	151.56 X	22909	8.435	402.5	17.6	17.6
					151.15 X					
					150.03					
2	PCC	M15	26/02/2021	26/03/2021	151.21 X	22892	8.725	409.3	17.9	
					151.39 X					
					151.01					
3	PCC	M15	26/02/2021	26/03/2021	150.86 X	22835	8.757	399.1	17.5	
					151.36 X					
					150.91					

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2021-02-04-06 Date: 09/02/2021
Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division
Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20
Date of Receipt : 04-02-21
Customer ID : Drain Bottom Slab Concrete, 2nd cross road
Sample Type /Size : 150X150X150 mm
Sample grade/Age : M20 / 7 Days Compressive Strength
Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test : 09/02/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Bottom Slab Concrete	M20	02/02/2021	09/02/2021	150.49 X	22579	8.389	411.7	18.2	18.2
					150.04 X					
					151.15					
2	Drain Bottom Slab Concrete	M20	02/02/2021	09/02/2021	151.09 X	22652	8.614	411.8	18.2	
					149.93 X					
					150.71					
3	Drain Bottom Slab Concrete	M20	02/02/2021	09/02/2021	150.63 X	22562	8.562	407.5	18.1	
					149.78 X					
					149.51					

* The results obtained are satisfactory as per standard requirements.

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R. KARTHIK RECHAN
Authorized Signatory
Quality Manager



TEST REPORT OF CEMENT CONCRETE CUBES

CP-2021-02-04-06
Date: 10/02/2021
Asphalting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division
M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
BBMP/EE/YNK.D/W.O/199/2019-20
05-02-21
Drain Bottom Slab Concrete, Anugraha layout 1st cross
150X150X150 mm
M20 / 7 Days Compressive Strength
IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
10/02/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Bottom Slab Concrete	M20	03/02/2021	10/02/2021	150.83 X 149.28 X 150.38	22516	8.389	425.7	18.9	18.7
2	Drain Bottom Slab Concrete	M20	03/02/2021	10/02/2021	149.89 X 149.15 X 150.66	22356	8.614	411.1	18.4	
3	Drain Bottom Slab Concrete	M20	03/02/2021	10/02/2021	151.62 X 151.71 X 150.53	23003	8.562	434.5	18.9	

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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AN ISO 9001 : 2008 COMPANY & NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005

4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: TC-5548

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2021-02-04-06 Date: 03/03/2021

Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010

Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20

Date of Receipt : 05-02-21

Customer ID : Drain Bottom Slab Concrete, 2nd main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/03/2021

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Bottom Slab Concrete	M20	03/02/2021	03/03/2021	149.97 X 150.70 X 150.75	22600	8.530	536.4	23.7	23.1
2	Drain Bottom Slab Concrete	M20	03/02/2021	03/03/2021	149.32 X 149.72 X 150.01	22357	8.882	497.5	22.3	
3	Drain Bottom Slab Concrete	M20	03/02/2021	03/03/2021	151.06 X 149.02 X 151.70	22512	8.667	526.1	23.4	

The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
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Quality Manager

Page 1/1
****End of Report****

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2021-02-04-06 Date: 05/03/2021

Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division

Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010

Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20

Date of Receipt : 08-02-21

Customer ID : Drain Side Wall Concrete, 1st main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/03/2021

Date of test : 05/03/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Side Wall Concrete	M20	05/02/2021	05/03/2021	150.87 X	22733	8.530	544.4	23.9	23.3
					150.68 X					
					151.69					
2	Drain Side Wall Concrete	M20	05/02/2021	05/03/2021	150.64 X	22687	8.882	514.9	22.7	
					150.60 X					
					151.98					
3	Drain Side Wall Concrete	M20	05/02/2021	05/03/2021	149.47 X	22511	8.667	526.4	23.4	
					150.60 X					
					151.29					

The results obtained are satisfactory as per standard requirements.

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Quality Manager



TEST REPORT OF CEMENT CONCRETE CUBES

CP-2021-02-04-06 Date: 13/02/2021

Asphalting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division

M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010

BBMP/EE/YNK.D/W.O/199/2019-20

08-02-21

Drain Side Wall Concrete, 4th Cross Road

150X150X150 mm

M20 / 7 Days Compressive Strength

IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

13/02/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Side Wall Concrete	M20	06/02/2021	13/02/2021	151.23 X 150.00 X 151.29	22684	8.389	428.2	18.9	18.6
2	Drain Side Wall Concrete	M20	06/02/2021	13/02/2021	149.38 X 150.58 X 150.87	22494	8.614	407.9	18.1	
3	Drain Side Wall Concrete	M20	06/02/2021	13/02/2021	149.75 X 149.25 X 150.86	22349	8.562	420.3	18.8	

The results obtained are satisfactory as per standard requirements.

(Signature)

ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ
ಯಂತ್ರೋಪಕರಣ ಸಂಪನ್ಮೂಲ
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(Signature)

R KARTHIK RECHAN
Authorized Signatory
Quality Manager



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TEST REPORT OF CEMENT CONCRETE CUBES

CP-2021-02-04-06
Date: 17/02/2021
Asphalting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division
M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
BBMP/EE/YNK.D/W.O/199/2019-20
12-02-21
Culvert Bottom Slab Concrete, 2nd cross road
150X150X150 mm
M20 / 7 Days Compressive Strength
IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
17/02/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Culvert Bottom Slab Concrete	M20	10/02/2021	17/02/2021	149.56 X 149.91 X 150.66	22421	8.389	422.5	18.8	18.8
2	Culvert Bottom Slab Concrete	M20	10/02/2021	17/02/2021	149.84 X 149.45 X 149.73	22394	8.614	417.5	18.6	
3	Culvert Bottom Slab Concrete	M20	10/02/2021	17/02/2021	151.19 X 150.84 X 150.25	22805	8.562	429.8	18.8	

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಮಾನ್ಯತೆ ಅಧಿಕಾರಿ
ಯುಪಾಧಿಕಾರಿ ಸಹಾಯಕಿ
ಇ.ಇ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108



FOR CIVIL PRO.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Format No: CP/TF/01

Job ID : CP-2021-02-04-06
Date: 20/02/2021
Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division
Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20
Date of Receipt : 15-02-21
Customer ID : Culvert Side Wall Concrete, 2nd cross road
Sample Type /Size : 150X150X150 mm
Sample grade/Age : M20 / 7 Days Compressive Strength
Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test : 20/02/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Culvert Side Wall Concrete	M20	13/02/2021	20/02/2021	149.71 X 149.25 X 149.62	22344	8.389	406.0	18.2	18.2
2	Culvert Side Wall Concrete	M20	13/02/2021	20/02/2021	150.48 X 149.24 X 149.95	22458	8.614	414.4	18.5	
3	Culvert Side Wall Concrete	M20	13/02/2021	20/02/2021	151.95 X 150.60 X 149.28	22883	8.562	414.4	18.1	

The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಮಾನ್ಯತೆ ಪಡೆದ ಉಪನಿರ್ದೇಶಕರು
ಇ.ಇ.ಎಂ.ಎ. ಬೆಂಗಳೂರು-108



FOR CIVIL Pro.

R. KARTHIK RECHAN
Authorized Signatory
Quality Manager



AN ISO 9001 : 2008 COMPANY & NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: TC-5548

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

ID : CP-2021-02-04-06 Date: 13/03/2021
 Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03 Yelahanka satellite Town sub Division
 Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
 Customer's Reference : BBMP/EE/YNK.D/W.O/199/2019-20
 Date of Receipt : 15-02-21
 Customer ID : Culvert Side Wall Concrete, 1st main Road
 Sample Type /Size : 150X150X150 mm
 Sample grade/Age : M20 / 28 Days Compressive Strength
 Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
 Date of test : 13/03/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Culvert Side Wall Concrete	M20	13/02/2021	13/03/2021	151.30 X	22618	8.530	526.2	23.3	23.1
					149.48 X					
					150.23					
2	Culvert Side Wall Concrete	M20	13/02/2021	13/03/2021	149.73 X	22337	8.882	505.0	22.6	
					149.18 X					
					151.94					
3	Culvert Side Wall Concrete	M20	13/02/2021	13/03/2021	151.02 X	22597	8.667	527.0	23.3	
					149.63 X					
					149.22					

The results obtained are satisfactory as per standard requirements.

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 ಇ.ಇ.ಎಂ.ಇ. ಲೇಬೊರೇಟರಿ-ಬೆಂಗಳೂರು



FOR CIVIL Pro.
 R KARTHIK RECHAN
 Authorized Signatory
 Quality Manager



TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-RW-2021-02-04-06 Date: 10-03-21
Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03
Yelahanka satellite Town sub Division
Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main
Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
Customer Reference : BBMP/EE/YNK.D/W.O/199/2019-20
Date of Receipt : 08-03-21
Type of Mix : WMM (Wet Mix Macadam)
Date of test : 08-03-21
Overa Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

*The results obtained are satisfactory as per standard requirements.

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FOR CIVIL Pro.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager



TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-RW-2021-02-04-06 Date: 12-03-21
Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03
Yelahanka satellite Town sub Division
Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main
Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
Customer Reference : BBMP/EE/YNK.D/W.O/199/2019-20
Date of Receipt : 10-03-21
Type of Mix : WMM (Wet Mix Macadam)
Date of test : 10-03-21
Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

* The results obtained are satisfactory as per standard requirements.

ಸಹಾಯಕ ಮಾನ್ಯತೆ ಪಡೆದಿದೆ
ಯಶವಂತ ಸಾಹೇಬ್ ಸಾಧನಾರಿ
ಇ.ಎಂ.ಓ. ಬೆಂಗಳೂರು-106



FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager



TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-RW-2021-02-04-06 Date: 17-03-21
Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03
Yelahanka satellite Town sub Division
Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block, 17th Main
Shivakumar Swamy Building, Bhashyam Circle Bangalore-560010
Customer Reference : BBMP/EE/YNK.D/W.O/199/2019-20
Date of Receipt : 15-03-21
Type of Mix : WMM (Wet Mix Macadam)
Date of test : 15-03-21
Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

* The results obtained are satisfactory as per standard requirements.

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R. K. R. CHAN
Authorized Signatory
Quality Manager



FOR CIVIL Pro.
R. K. R. CHAN
Authorized Signatory
Quality Manager



DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE (IS 2386 (Part 1) 1963 (RA 2007))

Lab ID : CP-RW-2021-02-04-06 Date: 12-03-21
Project Name : Asphaltting to Sainagara phase-I and surrounding ares in ward no-03
Yelahanka satellite Town sub Division
Agency : M/s. Technical Manager (West), KRIDL, Bangaluru, 5th Block,
17th Main Shivakumar Swamy Building, Bhashyam Circle
Bangalore-560010
Customer Reference : BBMP/EE/YNK.D/W.O/199/2019-20
Date of Receipt : 09-03-21
Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test : 09-03-21

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.5%	
Combined Flakiness and Elongation Index for WMM	25.3%	

* The results obtained are satisfactory as per standard requirements.

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ಯೋಜನೆ ಮತ್ತು ನಿರ್ವಹಣೆ.
ಇ.ಎಂ.ಎ. ಕೋಡ್-106



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R KARTHIK RECHAN
Authorized Signatory
Quality Manager